

What is claimed is:

1. A polymeric lightly pigmented overdyed fiber, comprising:
 - a polymer;
 - 5 at least two color pigments, wherein the color pigments are selected from at least two of the color families of the trichromatic dye color system, the trichromatic dye color system comprising blue, yellow and red;
 - 10 optionally black pigment; and
 - a dye appropriate for the polymer.
2. The fiber of claim 1, wherein the total color pigment plus optional black pigment loading level comprises about 10 to about 1000 ppm by weight of the fiber.
- 15 3. The fiber of claim 2, wherein the total color pigment plus optional black pigment loading level comprises about 25 to about 600 ppm by weight of the fiber.
- 20 4. The fiber of claim 2, wherein the polymer is selected from the group consisting of polylactic acid, polyamide, and copolymers and blends thereof.
5. The fiber of claim 4, wherein the polyamide comprises nylon.

6. The fiber of claim 5, wherein the nylon comprises nylon 6, nylon 66, nylon 4,6, nylon 6, 12, and blends and copolymers thereof.
7. The fiber of claim 5, wherein the nylon comprises
5 cationically dyeable nylon polymers.
8. The fiber of claim 1, wherein the dye comprises at least one of acid dye, pre-metallized dye, disperse dye, vat dye, cationic dye and reactive dye.
- 10 9. The fiber of claim 1, wherein the color pigments comprise a combination of at least two of Pigment Red 60, Pigment Red 63, Pigment Red 80, Pigment Red 66, Pigment Red 67, Pigment Red 81, Pigment Red 68, Pigment Red 73, Pigment Red 83, Pigment Yellow 65, Pigment Yellow 82, Pigment Yellow 85, Pigment Yellow 15 87, Pigment Blue 61, Pigment Blue 69, Pigment Blue 74, and Pigment Blue 78.
10. The fiber of claim 9, wherein the color pigments comprise at least two of Pigment Red 63, Pigment Blue
20 Blue 74, Pigment Blue 69. and Pigment Yellow 65.
11. The fiber of claim 9, wherein the black pigment comprises at least one of Pigment Black 72 and Pigment Black 64.
- 25 12. The fiber of claim 1, further comprising TiO₂ delusterant.

13. A uniformly overdyed article comprising a substantially homogeneous yarn, the yarn consisting essentially of the fiber of claim 1.

14. The overdyed article of claim 13, wherein the overdyed article comprises one of an article of apparel or a carpet.

15. A method for producing an overdyed lightly pigmented fiber, comprising:

10 extrusion spinning a blend of polymer and color pigment to form a pigmented fiber, the color pigment comprising at least two pigments selected from at least two of the color families of the trichromatic dye color system, the trichromatic dye color system comprising blue, yellow and red dyes, such that the 15 pigmented fiber comprises an L* value of about 70 to about 94; and

overdyeing the lightly pigmented fiber.

16. The method of claim 15, wherein the blend of polymer and color pigment further comprises an optional black pigment.

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25 17. The method of claim 15, wherein the color pigments comprise a combination of at least two of Pigment Red 60, Pigment Red 63, Pigment Red 80, Pigment Red 66, Pigment Red 67, Pigment Red 81, Pigment Red 68, Pigment Red 73, Pigment Red 83, Pigment Yellow 65, Pigment Yellow 82, Pigment Yellow 85, Pigment Yellow 87, Pigment Blue 61, Pigment Blue 69, Pigment Blue 74, and Pigment Blue 78.

18. The method of claim 17, wherein the color pigment comprises two or more of Pigment Red 63, Pigment Blue 74, Pigment Blue 69, and Pigment Yellow 65, and the black pigment comprises at least one of Pigment Black 5 72 or Pigment Black 64.
19. The method of claim 17, wherein the total loading level of the color pigment plus optional black pigment is about 10 to about 1000 ppm by weight of the pigmented fiber.
- 10 20. The method of claim 15, further comprising incorporating TiO₂ delusterant in the blend of polymer and color pigment prior to extrusion spinning.
21. The method of claim 15, wherein the overdyeing is performed at a pH of about 1.5 to about 10.
- 15 22. The method of claim 15, wherein the polymer comprises polylactic acid and blends and copolymers thereof or polyamide and blends and copolymers thereof.
23. The method of claim 22, wherein the polyamide comprises nylon 6, nylon 66, nylon 4,6 or nylon 6, 12.
- 20 24. The method of claim 23, wherein the polyamide comprises cationically dyeable nylon.
25. The method of claim 24, wherein the overdyeing is performed at a low pH, wherein further the dye comprises premetallized, acid, disperse, reactive or vat dye.

26. A method of producing uniformly dyed light fast carpet comprising:

extrusion spinning a plurality of lightly pigmented polymer filaments comprising color pigments having a total color pigment concentration loading of at least about 10 to about 1000 ppm by weight of the filament, wherein the color pigments comprise at least two pigments selected from at least two of the three families of the trichromatic dye color system, the trichromatic dye color system comprising blue, red and yellow dyes;

forming substantially homogeneous yarns from the pigmented filaments;

forming a tufted fabric from the yarns; and

dyeing the tufted fabric.

27. The method of claim 26, wherein the total color pigment loading comprises about 25 to about 600 ppm by weight of the filament.

20 28. The method of claim 26, wherein the filament further comprises TiO₂ delusterant.

29. The method of claim 26, wherein the dyeing is performed at a pH of about 1.5 to about 10.

25 30. The method of claim 26, wherein the lightly pigmented polymer filaments optionally further comprise black pigment, wherein the total color pigment loading and the black pigment loading

comprises about 10 to about 1000 ppm by weight of the filament.

31. The method of claim 30, wherein the total color pigment loading and the black pigment loading comprises about 25 to about 600 ppm by weight of the filament.
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32. The method of claim 30, wherein the color pigments comprise a combination of at least two of Pigment Red 60, Pigment Red 63, Pigment Red 80, Pigment Red 66, Pigment Red 67, Pigment Red 81, Pigment Red 68, Pigment Red 73, Pigment Red 83, Pigment Yellow 65, Pigment Yellow 82, Pigment Yellow 85, Pigment Yellow 87, Pigment Blue 61, Pigment Blue 69, Pigment Blue 74, and Pigment Blue 78.
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33. The method of claim 32, wherein the color pigments comprise two or more of Pigment Red 63, Pigment Blue 74, Pigment Blue 69, and Pigment Yellow 65 and the black pigment comprises at least one of Pigment Black 72 or Pigment Black 64.
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34. The method of claim 26, wherein the polymer comprises polylactic acid and blends and copolymers thereof or polyamide and blends and copolymers thereof.
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35. The method of claim 34, wherein the polyamide comprises nylon 6, nylon 66, nylon 4,6 or nylon 6, 12.
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36. The method of claim 35, wherein the polyamide further comprises cationically dyeable nylon.

37. The method of claim 36, wherein the dyeing is performed at a low pH, wherein further the dye comprises premetallized, acid, disperse, reactive or vat dye.
- 5 38. A uniformly colored article comprising a substantially homogeneous yarn, the yarn consisting essentially of the fiber made according to claim 15.
39. The article of claim 38, wherein the article comprises an article of apparel or a carpet.
- 10 40. A method for producing an overdyed article, comprising:
extrusion spinning a blend of polymer and color pigments to form a pigmented fiber, the color pigments comprising at least two pigments selected from at least two of the color families of the trichromatic dye color system, the trichromatic dye color system comprising blue, yellow and red dyes, such that the pigmented fiber comprises an L* value of about 70 to about 91;
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20 preparing a lightly pigmented yarn comprising the pigmented fiber;
- preparing an article comprising the lightly pigmented yarn; and
- overdyeing the article,
- 25 wherein the pigmented yarn comprising the article is substantially homogeneous.

41. The method of claim 40, wherein the blend of polymer and color pigments further comprises an optional black pigment.
42. The method of claim 41, wherein the color pigments comprise a combination of at least two of Pigment Red 60, Pigment Red 63, Pigment Red 80, Pigment Red 66, Pigment Red 67, Pigment Red 81, Pigment Red 68, Pigment Red 73, Pigment Red 83, Pigment Yellow 65, Pigment Yellow 82, Pigment Yellow 85, Pigment Yellow 87, Pigment Blue 61, Pigment Blue 69, Pigment Blue 74, and Pigment Blue 78.
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43. The method of claim 42, wherein the color pigment comprises two or more of Pigment Red 63, Pigment Blue 74, Pigment Blue 69, and Pigment Yellow 65, and the black pigment comprises at least one of Pigment Black 72 or Pigment Black 64.
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44. The method of claim 43, wherein the total loading level of the color pigment plus optional black pigment is about 10 to about 1000 ppm by weight of the pigmented fiber.
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45. The method of claim 41, wherein the polymer comprises polylactic acid and blends and copolymers thereof or polyamide and blends and copolymers thereof.
46. The method of claim 45, wherein the polyamide comprises nylon 6, nylon 66, nylon 4,6 or nylon 6, 12.
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